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CODIB-D-108/1
29 August 1963

UNITED STATES INTELLIGENCE BOARD
COMMITTEE ON DOCUMENTATION

Annual Report

1. Attached is a revised draft of the Fifth Annual Report to the USIB. All departmental contributions have been received and mats cut. Advance copies of these appendices will be sent to you under separate cover.

2. This revised draft, which takes into consideration those comments on the 30 July draft received by the Secretariat to date, will be considered by CODIB at its next meeting (5 September).



Paul A. Borel
Chairman

Attachment

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USIB-D-39.3/7

CODIB-AR-5
29 August 1963

UNITED STATES INTELLIGENCE BOARD
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COMMITTEE ON DOCUMENTATION
Fifth Annual Report

Authorization

The USIB Committee on Documentation (CODIB) operates under DCID 1/4 (New Series) dated 26 June 1959.

Scope

This report covers CODIB activities during Fiscal Year 1963, reflecting activities and problems of general interest or concern, with an attached checklist (Appendix A) of documents issued during the year; current membership is reflected in Appendix B. Information processing developments in individual member agencies, particularly those involving automatic data processing equipment, are reflected in Appendix C, distributed separately as a supplement to the main report. This supplement has been particularly well received by various USIB components in previous years as a vehicle for the dissemination of collated information on current indexing, storage and retrieval techniques, equipment utilization and other related developments

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in the Community as a whole, an over-view otherwise difficult to obtain.

Activities

As announced in the Outlook section of last year's Annual Report, CODIB's FY 63 program was principally that of the Staff for the Community Information Processing Study (SCIPS). To review the status of SCIPS developments, and to handle the various ad hoc problems of general interest, six Committee meetings were held and 27 staff papers issued. In a unique expansion of CODIB on-site visits to facilities engaged in significant information processing activities, many of the members attended the Congress in Munich of the International Federation of Information Processing Societies (IFIPS) and visited USAREUR and USAFE installations in Stuttgart, Heidelberg and Wiesbaden; the Director/SCIPS and the CODIB Secretary, also visited EUCOM headquarters in Paris. Ten other briefings or demonstrations were held, including visits to the (then) Armed Services Technical Intelligence Agency (ASTIA), the State Department, concerning their automation plans, and General Electric/Bethesda for a machine-oriented indications analysis technique session; oral presentations were given by representatives from DIA, DDR&E, NASA, State/External Research, and Jonkers Business Machines, Inc; equipment demonstrations included CIA/WALNUT's document machines and an Air Force/IBM machine

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translation demonstration, with communication link via voice telephone circuit between CIA's Library and IBM facilities in New York State.

The Subcommittee on Classification approved Amendment II to the Intelligence Subject Code (ISC), providing greater indexing specificity on certain subjects of interest to DIA and to CIA; the Working Group on Emergency Planning reviewed the individual deposit programs of CODIB member agencies and the Chairman visited various deposit sites in the U.S. mainland and in Hawaii; and the remaining CODIB sub-group, the Working Group on Remote Systems Input, having completed its work in development of Community specifications for a secure machine-language by-product typewriter, continued its efforts to obtain the release at the earliest date of funds to allow developmental work to get under way.

Membership

Many changes in representation occurred during the year, resulting in large measure from DIA assumption of various Service intelligence responsibilities and some activities: Mr. Edward C. Wilson was designated State representative vice Mr. Donald B. McCue; Capt. Donald F. Seaman, USN, as Navy representative vice LCDR William C. Patterson, Jr.; Lt. Col. L. K. Patterson, USA, as Army representative vice Lt. Col. T. B. Broaddus, USA, vice Mr. John F. Kullgren; Lt. Col. Kevorak Ghourdjian, USAF, as

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Air Force representative vice [redacted]

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as DIA representative vice [redacted] (For a complete list of members and alternates see Appendix B).

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Study of USIB Information Processing Problems

The SCIPS Stage I effort to accumulate during the year data on information holdings and handling procedures within the Community, to reduce these data to machine language for computer manipulation for evaluative purposes, and to draw conclusions, either for a Stage II follow-on effort or for recommendations to USIB for policy directives assigning specific responsibilities in intelligence information processing, had its difficulties.

Personnel shortages, both in terms of originally requested full-time commitments and staff cutback during the Cuban crisis, necessitated reduction in the number of organizations covered during the fact-finding phase, from the originally planned 200 or so, to 61, with only two components outside of the Washington area (SAC Headquarters, Offutt AFB and Air Force's Foreign Technology Division, Wright-Patterson AFB) being covered; the 61 surveyed include some 400 processing activities and about 5,000 people (perhaps 60% of the Community's information processing efforts), and maintain about 1,000 files of which perhaps one-third are at least partially automated.

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The fact-gathering procedures developed, including the very detailed questionnaires*, were difficult to learn and produced great quantities of data which had to be converted to machine language (the keypunching and computer programming of which was a major effort). These procedures engendered some controversy, largely because of the absence of precedence or experience in such an undertaking.

Intensive data gathering occurred from August 1962 to January 1963, with subsequent tapering off of data collection and emphasis on data reduction. The information gathered exists in the form of questionnaires and other documents; punched cards and EAM listings; magnetic tape files; and 30 (potentially, 83) catalog printouts, reflecting data contained in over 250, 000 SCIPS punched cards. This Collateral/SIGINT data base, plus other sensitive codeword data manually controlled, should be used for the benefit of all Community components, but policy on access to it needs to be (and is now being) developed.

In an all-day session immediately following the end of this reporting period, CODIB members were briefed on SCIPS findings to date. Detailed evaluation

*It is noteworthy that IBM, with its considerable experience, in attempting to develop information for market research purposes for a presently Company Confidential commercial version of CIA's WALNUT System (referred to as CYPRESS), felt that traditional market research methods were inadequate to the size and complexity of the task, and decided on the same approach of a very detailed and structured questionnaire as did SCIPS.

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of the data collected is now in process, with a report to USIB planned for October 1963.

Information Release

As in previous years, questions and problems concerning releases and use of intelligence and intelligence information occupied considerable Committee attention, particularly in implementing DCID 1/7, and more specifically, with regard to releases to contractors. A CODIB-prepared revision of the USIB policy paper on contractor releases (USIB-D-39.5/2) was considered by USIB, and remanded to CODIB for further consideration. Thus it was not resolved until after the end of the reporting period. If the Community is to continue its reliance on external research on intelligence problems, particularly in a tightened budgetary and T/O environment, more efficient release procedures with fewer middleman-handling requirements without security relaxation, would seem to be in order; also relevant, of course, is the quality of the externally-produced report if the most current information is withheld from the contractor. In this connection, the points made in the 1960 Annual Report, we feel, remain valid: viz, we must face up to the need for releasing more information, adopting procedures to make this possible, or, modify the Community's research facilities to enable research work now contracted out to be accomplished in-house.

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Keeping Informed

Keeping up with state-of-the-art developments as well as changing organizational or procedural details is a major problem to, and, as reflected in the Activities section above, a major effort of, the Committee. The volume of information about information processing itself is becoming unmanageable. Again, the points reflected in the Outlook section of the 1961 Annual Report, for Community action to control the information flood, are still valid; elsewhere, outside the Intelligence Community, these points are receiving increasing attention, in the Senate Committee on Government Operations hearings and in the excellent report of the President's Science Advisory Committee (PSAC)*, to name just two. CODIB tie-in with the non-USIB and non-governmental communities was expanded beyond that provided by our advisory and associate members from the National Bureau of Standards and National Science Foundation by virtue of the invitation from the Federal Council on Science and Technology's Committee on Scientific Information (COSI) to the CODIB Chairman to attend its meetings as an official observer.

* Science, Government and Information: The Responsibility of the Technical Community and the Government in the Transfer of Information, 10 January 1963

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It is ironic, and frustrating, to note that the legitimate concern in this area has in some quarters proceeded from non-action to band-wagon proportion reaction with great pressure for someone to do something, particularly with computers, the inference being that this problem area has just been brought to light. Perhaps more frustrating is the fact that, within the Community, historic awareness of the problem areas and recommendations as to solutions or steps toward solutions, have not been translated into action - or have been so translated only painfully and slowly. As example, the machine-language typewriter development referred to in the Activities section above was put, and accepted, as an urgent requirement in March of 1961; nevertheless, by the end of Fiscal Year 1963 and after concerted CODIB urging, including a status report at each meeting, no bids had been let for research and development. Considerable progress has been made in field source formatting of SIGINT data, with substantial implementation in 1962. Development of a standardized format for reporting raw collateral information, which proceeded slowly over the last five years, now more closely approaches the long-sought goal with the adoption of the new DIA format. In truth, this was a unilateral development to meet DIA's own needs only fortuitously coordinated with CIA, and never formally brought to CODIB's attention. In many other areas,

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meaningful report titles, common indexing, reporting cycle speedup, all-source developments, machine language file generation, coordinated action during the past year has been minimal. SIGINT/Collateral information interplay is obvious and techniques, particularly machine techniques, for handling each should be concerned with both as part of the information data base. Largely owing to the long-standing centralized national direction of reporting efforts in the SIGINT area, capturing information in machine language by the reporting source has advanced more rapidly than in the collateral area. To ensure maximum coordination and widest possible benefits from such efforts the SIGINT Committee requested CODIB-SIGINT joint sponsorship of an ADP policy paper (USIB-S-13.1/4, 24 May 63) dealing with three ADP policy considerations of pressing importance to the SIGINT Community. These and like matters of mutual interest have led CODIB to recommend the establishment of a Joint CODIB-SIGINT Committee on ADP. While the SIGINT Committee did not accept this during the course of discussions on the above paper, the matter will be reconsidered later.

Climate for Action on CODIB Problems

The comments made above reflect our strong conviction that steps can be taken within the present state-of-the-art to ease some of the current problems.

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With additional advances in the state-of-the-art and the development of some new equipment, we could moreover considerably increase the degree of integration of various systems in the Community into a system of systems complex to the mutual advantage of the participants. Steps in this direction would require support at the most senior levels within the various departments. The climate for such support seems better now than it has been. Our original hope, which we repeat, is that the SCIPS study will provide objective "meteorological" back-up to enable the senior levels to formulate, within today's climate, a projected action plan.

Perspective: Developments outside CODIB of Special Interest

Of special interest to CODIB has been the activity within the Government (but outside the Intelligence Community) to get a more firm grip on the science information problem. The Federal Council on Science and Technology, and its Committee on Scientific Information, and the new DOD Director of Technical Information are providing more vigorous leadership and purpose than has hitherto been the case in this field.

Inasmuch as S&T information and intelligence information have large areas which overlap, moves made to improve matters in the S&T field inevitably have a much wider impact. Fortuitously, much of the philosophy guiding this action has been that espoused by CODIB in the past, and hence

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is to be welcomed.

In the Congress, Senator Humphrey is again pushing for progress in the handling of information, having been disappointed at improvements made to date. In hearings last fall, he characterized the improvements as insufficient.

"They /the improvements/ are usually too limited and marginal in effect. The Federal agencies are still so choked up with innumerable documents - monographs, research papers, administrative reports, etc. - that nobody knows where they are, what you are supposed to do with them, how they got there.

• • •
"One of our purposes . . . is to get the new Federal budget specific moneys for improved information programs /i.e., a separate line item in the budget of each major Federal department or agency for its information-communication activity/."^{*}

* Hearings before the Subcommittee on Reorganization and International Organizations, 87th Congress, Second Session, September 21, 1962, Part 1, pp. 2 and 93.

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As mentioned above, a particularly good study was made by a panel on science information of The President's Science Advisory Committee.* All of its findings have relevance to the CODIB mission. In summary these are:

- a. The technical community must recognize that handling of technical information is a worthy and integral part of science.
- b. The individual author must accept more responsibility for subsequent retrieval of what is published.
- c. Techniques of handling information must be widely taught.
- d. The technical community must explore and exploit new switching methods.
 - (1) The specialized information center is the key to the rationalization of our information system. Ultimately the specialized center will become the accepted retailer of information, switching, interpreting, and otherwise processing information from the large wholesale depositories and archival journals to the individual users.

* Science, Government, and Information, *supra*.

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(2) There is little question of the practicality of the central depository.

(3) Mechanical equipment offers hope for easing the information problem.

(4) Software, including methods of analyzing, indexing, and programming, is at least as necessary as hardware for successful information retrieval.

e. Uniformity and compatibility are desirable. Switching between separate subsystems of the entire information system will be effective only if the different subsystems adopt uniform practices.

A study* prepared under grant by the Council of Library Resources is nearing completion. The survey team (King, Edmundson, Flood, Kochen, Libby, Swanson, Wally, and Dubester) investigated the possibilities of automating the functions of large libraries. Here are the conclusions:

* As a supplement, the Planning Research Corporation prepared A Cost Analysis of an Automated System for the Library of Congress, Spiro and Kotin, PRC R-267, 1 August 1962

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- a. Automation can, within the next decade, augment and accelerate the services rendered by large research libraries and have a profound effect upon their responsiveness to the needs of users.
- b. Automation of certain reference, record, and document retrieval functions of large libraries is technically and economically feasible.
- c. The retrieval of information from documents by automatic methods is not technically feasible for large collections, but must be anticipated.
- d. Automation will enhance, not impair, adaptability of libraries to changes in the national research environment and will facilitate the development of a national library system.
- e. Automation will not reduce operating costs, but will reduce the cost-to-performance ratio.

During May 26-29, a conference on Libraries and Automation was held at Arlie Foundation, Warrenton, Virginia, under the sponsorship of CRL, NSF and the Library of Congress. The papers read at this conference merit CODIB attention.

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Mid-1962 saw the completion of the report of an ad hoc study panel of PSAC on Non-Numerical Information Processing. These findings reflected the panel's attempt to assess the state of the art in this field - one most closely related to processing intelligence information. Two fundamental difficulties were identified regarding present applications, even though large scale commitments to the development of operational hardware systems have been made:

- a. A lack of precise definition and specification both of the objectives to be reached and of the relevant non-numerical techniques; and,
- b. A shortage of first-rate research workers in the field.

To quote the panel, "Symptomatic of these difficulties are the present and growing external pressures toward large scale hardware procurement in cases where the operational purpose to be served is vague and where, in any event, the present state of the art in hardware and software is inadequate to support the grandiose 'intellectual process' that is so ardently desired."

Finally, the Interagency Committee on Automatic Data Processing continues its pursuit in fields of interest to CODIB also.

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It would thus appear that CODIB has much to gain by devoting some of its attention during the year ahead to strengthening its ties with organizations actively pursuing goals of mutual concern.

Paul A. Borel
Chairman
USIB Committee on Documentation

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